

Give the birth dose . . .

Hepatitis B vaccine at birth saves lives!

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On October 17, 2001, the Advisory Committee on Immunization Practices (ACIP) voted to recommend a birth dose of hepatitis B vaccine for all U.S. infants.

The following article is adapted from an open letter to the Advisory Committee on Immunization Practices (ACIP), American Academy of Pediatrics, American Academy of Family Physicians, American College of Obstetricians and Gynecologists, and other medical professional organizations.

The Immunization Action Coalition (IAC) urges all health professionals and hospitals to protect all infants from hepatitis B virus (HBV) infection by administering the first dose of hepatitis B vaccine to every infant at birth and no later than hospital discharge.

Approximately 19,000 women with chronic hepatitis B infection give birth in the U.S. each year. Up to 95% of perinatal infections can be prevented by postexposure prophylaxis given within 12 hours of birth. Tragically, many babies are exposed to HBV at birth but do not receive appropriate postexposure prophylaxis.

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Why is such a policy necessary? Following are some of the ways infants who are not vaccinated at birth become infected:

- The pregnant woman is tested and found to be hepatitis B surface antigen (HBsAg) positive, but her status is not communicated to the newborn nursery. The infant receives neither hepatitis B vaccine nor HBIG protection at birth.
- A chronically infected pregnant woman is tested but with the wrong test. For example, antibody to hepatitis B surface antigen is sometimes ordered in error instead of HBsAg. This can happen because some laboratories use the improper and confusing abbreviation HBsAb instead of anti-HBs. This misordering of a test is relatively common since the two abbreviations (HBsAg and HBsAb) differ by only one letter. However,

when her incorrectly ordered test comes back "negative," the woman may have actually been HBsAg positive and her infant would not receive appropriate postexposure prophylaxis.

- The pregnant woman is HBsAg positive, but her test results are misinterpreted or mistranscribed into her prenatal record or her infant's chart. Her infant does not receive HBIG or hepatitis B vaccine.
- The pregnant woman is not tested for HBsAg either prenatally or in the hospital at the time of delivery. Women in this group have a higher likelihood of being HBsAg-positive. Her infant does not receive hepatitis B vaccine in the hospital, even though it is recommended within 12 hours of birth for infants whose mothers' test results are unknown.
- The woman is tested in early pregnancy for HBsAg and is found to be negative. She develops HBV infection later in pregnancy, but it is not detected, even though it is recommended by CDC that high-risk women be retested later in pregnancy. Because the infection is not clinically detected by her health care provider, her infant does not receive hepatitis B vaccine or HBIG at birth.
- The mother is HBsAg negative, but the infant is exposed to HBV postnatally from another family member or caregiver. This occurs in two-thirds of the cases of childhood transmission.

While there are advantages to giving the first dose at a later well-baby visit, these are advantages of administrative convenience. The primary advantage of giving the first dose at birth is that it saves lives.

In 2001 and 2002, IAC surveyed hepatitis coordinators at every state health department as well as at city and county CDC projects to express their views about providing hepatitis B vaccine in the hospital. Their responses contained many examples of children who were unprotected or inadequately protected because health professionals failed to order or misordered the hepatitis B blood test or misinterpreted, mistranscribed, or miscommunicated the test results of the children's mothers.

These state coordinators' reports tell us that no matter how well healthcare providers think they are doing with HBsAg screening of all pregnant women, serious mistakes continue to occur; chil-

The birth dose recommendation for hepatitis B is published by CDC, AAP, and AAFP in the current U.S. Recommended Childhood Immunization Schedule.

To obtain a copy, visit www.immunize.org/cdc/child-schedule.pdf

dren are unnecessarily being exposed without the benefit of postexposure prophylaxis, and at least one baby has died. In order to overcome these failures, all 50 state hepatitis coordinators overwhelmingly endorse providing a birth dose.

To maximally protect every newborn, we must vaccinate *all* infants (regardless of the mother's HBsAg status) prior to hospital discharge with Engerix-B or Recombivax HB. Providers who wish to complete the series using hepatitis B-containing combination vaccines (Comvax, Pediarix), may do so by giving three additional doses. Giving a total of four doses of hepatitis B vaccine to infants is acceptable to CDC, AAP, AAFP, and these vaccine doses are covered under the Vaccines for Children (VFC) program. Because the preservative thimerosal has been removed from all hepatitis B vaccines in the U.S., thimerosal should no longer be an obstacle for clinicians.

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Hepatitis B vaccine is a highly effective vaccine. Studies have shown that infants of the most highly infectious mothers (women who are both HBsAg and HBeAg positive) who receive postexposure prophylaxis with hepatitis B vaccine alone (without HBIG) at birth are protected in up to 95% of cases, essentially the same level of protection afforded by administering hepatitis B vaccine in addition to HBIG. Even higher rates of protection with postexposure prophylaxis have been demonstrated in infants born to less infectious mothers (those who are HBsAg positive and HBeAg negative).

Please read the hepatitis coordinators survey results (see the web address box at left), including descriptions of their experiences with failures of the current system—failures that largely can be prevented by administering hepatitis B vaccine to infants before they go home from the hospital.

Your support for providing a birth dose of hepatitis B vaccine to infants while still in the hospital will protect and save lives that are now being put at risk. ♦

Here's more information about why to give the birth dose

To read the results of IAC's surveys of state health department hepatitis coordinators, visit:

www.immunize.org/surveys

For more information about why all babies should receive the first dose of hepatitis B vaccine in the hospital, go to the Birth Dose page of IAC's website at:

www.immunize.org/birthdose